

Remarks**Summary of Status of Amendments and Office Action**

In the present amendment, claims 1 and 7 are amended. Claims 2 and 11-20 have been previously canceled. Therefore, claims 1 and 3-10 are pending in the application with claim 1 being independent.

Claims 1 and 3-10 are rejected under 35 U.S.C. §112, second paragraph as being indefinite.

Claims 1 and 3-10 are rejected under 35 U.S.C. § 102(b) as being anticipated by Eisenberg et al. (U.S. Patent No. 5,436,580).

Claims 1 and 7 are amended to even more clearly recite the claimed subject matter. Support for the amendments is found throughout the application as filed, and as set forth below. No new matter is added.

Claim of Priority

Applicants express appreciation for the acknowledgement of the claim of foreign priority to Japanese Application No. 269611/1997, filed October 2, 1997, as well as receipt of the certified copy of the document.

Response to § 112, Second Paragraph Rejections

The rejection of claims 1 and 3-10 under 35 U.S.C. § 112, second paragraph as being indefinite are maintained by the Office Action because the Office Action asserts that

the phrase "high" does not recite the limitation that is relied upon on page 23 of the instant specification, which recites "highest scores." The Office Action asserts that one of ordinary skill in the art would not be able to readily determine the metes and bounds of which at least one template would be considered to have a high similarity versus low similarity.

Claim 7 is rejected under 35 U.S.C. § 112, second paragraph as being indefinite because the Office Action asserts that although the instant specification at pages 18-19 discusses the matching of the candidate protein to the query to determine the best matching score, the phrase "matching by sliding one or more core segment sequences on the query sequence" in the instant claims do not recite the term "candidate protein." Also, the Office Action asserts that claim 7 fails to actively recite where the two or more core segment sequences are from, and there is insufficient antecedent basis for the limitation "the two or more core segment sequences" because claim 1 only recites "two or more segment sequences."

In response, Applicant notes that the claims pending prior to the present amendment definitely define what Applicant considers to be the present invention. However, in order to advance prosecution of the present application, and without acquiescence, Applicant has amended claim 1 to replace "high" with "highest," and to recite "core segment sequences." Additionally, claim 7 has been amended to recite a "reference protein." Support for this amendment may be found in the specification at page 10, second paragraph, and at page 19, lines 5-6.

In view of the foregoing, Applicant respectfully requests withdrawal of the rejections of claims 1 and 3-10 under 35 U.S.C. § 112, second paragraph.

Response to 35 U.S.C. § 102(b)

Claims 1 and 3-10 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,436,850 Eisenberg et al. The Office Action asserts that Eisenberg discloses that all sequences in its database of target sequences are aligned with 3D structure profile using a dynamic programming, which allows insertions and deletions (or gaps) in the alignment. The Office Action asserts that because Eisenberg employs a dynamic programming for the practice of its method, the programming of which involves segmentation analysis of N and C termini segment, and the dynamic programming is inherently disclosed by Eisenberg, the claimed invention is anticipated by Eisenberg.

Applicant notes that the Office Action of October 1, 2003, page 6 stated that the "'850 patent does not explicitly disclose that the comparison of sequences involve segmentation of the reference protein into two or more segments, wherein the segments comprise two or more continuous amino acid residues." Furthermore, Applicant notes that during a telephone interview with Applicant's representatives on September 4, 2003, it was agreed that amending claim 1 to add "of the two or more segment sequences" addressed the prior art rejection of record, and that the Office Action would need to undertake additional searching in light of the amendment before allowing the claims. In response and without expressing agreement or acquiescence with the rejection, Applicant amended the

claim to recite "of the two or more segment sequences" in the Amendment filed on March 31, 2004. Also, the Office Action has not found any art from additional searches that teaches or suggests Applicant's claimed invention. Therefore, Applicant respectfully notes that the present rejection is misplaced because the rejection has already been addressed by the Applicant in a previous Amendment, and communication with the Office Action. However, in order to expedite prosecution of the present amendment, Applicant notes that the claims explicitly state that the matching is based on each amino acid residue of each of the two or more core segment sequences of the reference protein and hydrophobicity or hydrophilicity property of the side chain of each amino acid residue of the query sequence.

Furthermore, in regard to the Office Action's assertions that Eisenberg ('850) inherently anticipates the claimed invention because it employs a dynamic programming as shown in U.S. Patent No. 6,512,981 to Eisenberg ('981), Applicant notes that the rejection does not point to any teaching in Eisenberg ('850) which discusses its use of "a dynamic programming algorithm" in the disclosed method. Instead, the Office Action points to the teachings in Eisenberg ('981) whose provisional application was filed more than two years after the issuance of Eisenberg ('850), as supporting the assertion that Eisenberg ('850) used this method. This is clearly insufficient to establish that Eisenberg ('850) would inherently satisfy the claims.

Additionally, in order to prove anticipation by inherency, the U.S. Patent and Trademark Office must show evidence which "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be

so recognized by persons of ordinary skill." Continental Can Co. USA v. Monsanto Co., 948 F.2d 1264, 1268 (Fed. Cir. 1991). The Office Action does not point to any teaching in Eisenberg ('850) which shows that the method claimed in Eisenberg ('981), a "dynamic programming algorithm," was necessarily present in Eisenberg ('850). This is because it was not present in Eisenberg ('850), as shown by the Eisenberg ('981) inventors need to patent this "dynamic programming algorithm." Finally, the Office Action does not state that one of ordinary skill in the art would have recognized that the method claimed in Eisenberg ('981) was necessarily present in Eisenberg ('850), nor could it make such an assertion in light of the facts. The Office Action has failed to meet its burden for making the inherency rejection.

Therefore, in view of the above, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1 and 3-10 under 35 U.S.C. §102(b).

CONCLUSION

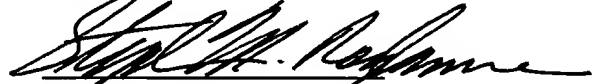
In view of the forgoing, Applicant respectfully submits that all pending claims patentably define Applicant's invention. Allowance of the application with an early mailing date of the Notices of Allowance and Allowability is therefore respectfully requested.

P19291.A16

Application No. 09/508,527

Any comments or questions concerning this application can be directed to the undersigned at the telephone number given below.

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April 14, 2005
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